

Valley River Mts., 5 mi. S.E. of Andrews, Cherokee Co.,
North Carolina:

<i>Polygyra tridentata</i> Say	<i>Mesomphix laevigata</i> Pils.
<i>Polygyra rugeli</i> Shuttl.	<i>Zonitoides arboreus</i> Say
<i>Polygyra normalis</i> Pils.	<i>Ventridens elliotti</i> Redf.
<i>Polygyra clarkii</i> Lea	<i>Ventridens acerra</i> Lewis
<i>Polygyra wheatleyi</i> Bld.	<i>Gastrodonta interna</i> Say
<i>Polygyra magnifumosa</i> Pils.	<i>Anguispira alternata</i> Say
<i>Omphalina andrewsae</i> Pils.	<i>Discus patula</i> (Desh.)
<i>Omphalina a. montivaga</i> Pils.	<i>Haplotrema concavum</i> Say
<i>Omphalina subplana</i> Binn.	

Two and one-half miles east of Andrews, Cherokee Co.,
North Carolina:

<i>Polygyra tridentata</i> Say	<i>Retinella junaluskana</i>
<i>Polygyra rugeli</i> Shuttl.	Cl. & Bks.
<i>Polygyra appressa</i>	<i>Ventridens elliotti</i> Redf.
<i>perigrapta</i> Pils.	<i>Ventridens acerra</i> Lewis
<i>Polygyra clarkii</i> Lea	<i>Ventridens gularis</i> Say
<i>Polygyra barbiger</i> Redf.	<i>Ventridens intertextus</i> Binn.
<i>Polygyra magnifumosa</i> Pils.	<i>Ventridens demissus</i> Binn.
<i>Polygyra cincta</i> Lea	<i>Gastrodonta interna</i> Say
<i>Retinella pentadelphica</i> Pils.	<i>Euconulus chersinus</i> Say
<i>Retinella praecox</i> Baker	<i>Anguispira alternata</i> Say
	<i>Discus patula</i> Desh.

NOTES ON WESTERN CANADIAN MOLLUSCA—PLANORBIS
CAMPANULATUS WISCONSINENSIS WINSLOW

BY ALAN MOZLEY

The Johns Hopkins University

The molluscan fauna of the western part of the Dominion of Canada is comparatively little known, and while the work of Dall and others had indicated the general nature of the molluscan population, the extent of this region is so vast, and the greater part of it is so inaccessible, that many important points regarding the geographic distribution of the members of this fauna are still obscure. In the course of zoogeo-

graphic studies, it is essential to ascertain not merely the presence of an organism in a certain territory, but at the same time, the extent of the distribution. This is especially true in the sub-arctic region where many animals approach the boundaries of their distribution. At the present time, such information regarding the molluscs of the northern part of North America is almost completely lacking and as a result other workers may be led to believe, from the paucity of records in the literature, that certain species are rarities in the region, while actually this is not at all the case. This may be true of *Planorbis campanulatus wisconsinensis*, and it therefore appears to be worth while to publish a *resumé* of the information so far collected, even though the study as a whole has not yet been brought to a conclusion.

Planorbis campanulatus wisconsinensis is a common and characteristic mollusk in the eastern part of the Province of Manitoba and western Ontario. It is particularly abundant in the lakes on the Canadian Shield, and also to be found here and there in the adjoining forested areas. It has not been collected in any of the lakes on the plains of southern Saskatchewan and Alberta, and is also absent, apparently, from the Rocky Mountain region in the neighborhood of Jasper National Park (latitude 53° N.). It would appear, therefore, that the variety is more or less confined in its distribution to the wooded areas. The record from southern Saskatchewan (near Madge Lake) is from a body of water situated on a southern spur of the northern coniferous forest.

The northernmost locality in the Province of Manitoba from which this variety is recorded is Split Lake, which is situated some distance to the west of Mile 279 on the Hudson Bay Railway (i.e., 279 miles northeast of Le Pas, Manitoba). It is noteworthy that this form was not found to be an inhabitant of the ponds or small lakes on the Barren Ground along the shores of Hudson Bay to the east of Fort Churchill, either in the rock-bound basins or the boggy pools of the tundra, although other species of molluscs were found in both of these situations. Likewise an examination of the pools to the south and west of the ruins of Fort Prince of

Wales, in the neighborhood of the northernmost trees, failed to reveal its presence. In view of this, the northern limit of the range of this variety in this part of the continent appears to be now known within much narrower limits than was previously the case. Whether or not it inhabits the larger bodies of water situated on or near the boundary of the tundra remains to be seen.

Included in this note are only records based upon specimens which have been compared with shells of *wisconsinensis* from the state of Michigan and elsewhere which were obtained through the kindness of Dr. Bryant Walker. Records previously reported are:

ONTARIO. Minaki, Winnipeg River; White Dog, Winnipeg River; Alice and Onion Lakes near Minaki; Redditt, Star Lake; English River, near its junction with the Winnipeg River (Mozley, NAUTILUS, XXXIX, p. 126, 1926).

MANITOBA. Indian Bay station, G. W. W. D. Ry., Falcon Bay (Mozley, loc. cit.); Indian Bay station, Snake Lake (NAUTILUS, XL, p. 60, 1926). Brereton, Brereton and Mud Turtle Lakes (Canadian Field Naturalist, XLI, p. 60, 1927).

The following are new records:

ONTARIO. Lake two and a half miles west of Caramet; Savant Lake district, Elbow Lake; Silver Lake thirty miles east of Port Arthur; marshy pond one mile east of Nickle Lake siding, C. N. Ry.; Rocky Inlet, Rainy Lake.

MANITOBA. Whiteshell River, above the second rapid below Betula Lake; Whiteshell Lake; Crow Duck Lake; small lake on the portage between Whiteshell and Crow Duck Lakes. In stomach of sturgeon from the Winnipeg River above the Seven Sisters Falls. Big Black River near its mouth; Berens River, near its mouth—Herb (Wekusko) Lake, ten miles west of Mile 81 Hudson Bay Railway; lake near Waboden, Mile 137 H. B. R.; Landing Lake near Mile 183, H. B. R.; Split Lake, west of mile 279, H. B. R.

SASKATCHEWAN. Small lake one mile west of Madge Lake, Riding Mountain, north of Kamsack, Sask.

Habitat preferences.—*Planorbis campanulatus wisconsinensis* is often to be found in both exposed and protected situations in fairly small lakes. It also occurs sometimes in rivers, particularly along their marshy borders. At Indian Bay, Manitoba, it has been found abundantly in quiet water

on driftwood and among aquatic plants such as *Zizania* and *Utricularia*. At Minaki it inhabits the rocky shores of a quiet backwater of the Winnipeg River, while in Lake Brerton and Mud Turtle Lake it is to be found on shores of smooth rock which are more or less subject to wave action. Beds of wild rice (*Zizania*) such as are found in Snake and the Whiteshell Lakes usually afford excellent habitats. In general the abundance of this snail in the region of the northern coniferous forest stands in striking contrast to its complete absence (within the area covered) from the forest-grassland transition and plains regions. As has been noted above, it also appears to be absent from the Barren Ground.

NEW PHILIPPINE ISLAND LAND SHELLS

BY MAXWELL SMITH

RHYSOTA LAMARCKIANA Lea *GLOBOSA*, new subspecies. Pl. 4, fig. 10.

Spire more produced than in the type, nuclear whorls similar but others more rounded, suture well impressed, peripheral keel less acute with a light zone above, band below much narrower, spiral growth lines becoming inconspicuous upon the last whorl, brownish green color below. Alt. 29.5 mm., diameter 48.5 mm.

Habitat: Passi, Iloilo, Panay. "On leaves of bamboo shaded by buri palms along salty river called Taolong in Visayan dialect."

This distinct geographical race is easily separated by the high spire and unusual sculpture. Type in the writer's collection.

CAMAENA AMATANGANA, new species. Pl. 4, fig. 9.

Shell thin, pupiform, umbilicated, suture moderately impressed, yellow brown except for light yellow zone below the periphery forming a band which is also apparent upon the lower portion of the previous whorl adjoining the suture,